

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
13 January 2005 (13.01.2005)

PCT

(10) International Publication Number  
**WO 2005/003351 A1**

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(51) International Patent Classification<sup>7</sup>: C12N 15/12, C07K 14/47, A61K 38/17

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(21) International Application Number:  
PCT/AU2004/000919

(81) Designated States (unless otherwise indicated, for every  
kind of national protection available): AE, AG, AL, AM,  
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,  
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,  
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,  
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,  
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,  
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,  
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,  
ZW.

(22) International Filing Date: 8 July 2004 (08.07.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
60/485,790 8 July 2003 (08.07.2003) US

(84) Designated States (unless otherwise indicated, for every  
kind of regional protection available): ARIPO (BW, GH,  
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,  
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),  
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,  
FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI,  
SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ,  
GW, ML, MR, NE, SN, TD, TG).

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Published:  
— with international search report

For two-letter codes and other abbreviations, refer to the "Guid-  
ance Notes on Codes and Abbreviations" appearing at the begin-  
ning of each regular issue of the PCT Gazette.

WO 2005/003351 A1

(54) Title: DIFFERENTIAL EXPRESSION OF NUCLEIC ACID MOLECULES

(57) Abstract: The present invention relates generally to nucleic acid molecules expressed at least in the hypothalamus, liver, mesenteric adipose tissue, or red gastrocnemius muscle conveniently identified using differential display techniques under differing physiological conditions. The nucleic acid molecules are associated with or act as markers for conditions of *inter alia* a healthy state, myopathy, obesity, anorexia, weight maintenance, diabetes, disorders associated with mitochondrial dysfunction, genetic disorders and/or metabolic energy levels. More particularly, the present invention is directed to a nucleic acid molecule and/or its expression product for use in therapeutic and diagnostic protocols for conditions such as *inter alia* a myopathy, obesity, anorexia, weight maintenance, diabetes, disorders associated with mitochondrial dysfunction, genetic disorders and/or metabolic energy levels. The subject nucleic acid molecule and expression product and their derivatives, homologs, analogs and mimetics are proposed to be useful, therefore, as therapeutic and diagnostic agents for *inter alia* a myopathy, obesity, anorexia, weight maintenance, diabetes, disorders associated with mitochondrial dysfunction, genetic disorders and/or metabolic energy levels or as targets for the design and/or identification of modulators of their activity and/or function.